Chapter 7: Government and Community Impact Analysis

Introduction

In this chapter, EPA examines how the MP&M rule might affect the economic welfare of communities, where communities are defined as States, counties and metropolitan areas. This chapter also summarizes information on government impacts that supports EPA's compliance with the ***Unfunded Mandates Reform Act*** (**UMRA**).

Communities may suffer adverse impacts from a rule in two ways. First, local governments may incur costs to comply with the rule, if they operate MP&M facilities, or to administer the rule. Second, communities may be affected if MP&M facility closures resulting from the rule affect the health of their local economies.

7.1 Impacts on Governments

The proposed MP&M rule may have two effects on governments:

- Government-owned MP&M facilities may be subject to the proposed rule, and therefore incur compliance costs; and
- Municipalities that own ***publicly owned treatment works*** (**POTWs**) that receive influent from MP&M facilities subject to the rule may incur costs to implement the proposed rule. These include costs of permitting MP&M facilities that have not been previously permitted, and repermitting some MP&M facilities with existing permits earlier than would otherwise be required. In addition, POTWs may elect to issue mass-based permits to some MP&M facilities that currently have concentration-based permits, at an additional cost.

Chapter Contents

7.1.1 Impacts on Governments that Operate MP&M Facilities

Chapter 5 presented EPA's analysis of the proposed rule's impacts on government-owned MP&M facilities and on the governments that own them. The analysis shows that the proposed rule imposes only limited costs on government-owned facilities, because 3,603 (83 percent) of the facilities are exempted under the low flow cutoffs (110 General Metals facilities and 3,492 Oily Wastes facilities.)

An estimated 215 government-owned facilities (5 percent of the total) would incur costs under the proposed rule exceeding one percent of their baseline cost of service. Therefore, 95 percent of the government-owned facilities either incur no costs or are likely to be able to absorb the added costs within their existing budgets. None of the affected governments incur costs that cause them to exceed the thresholds for impacts on taxpayers or for government debt burden. EPA therefore does not expect the proposed rule to impose budgetary burdens on any of the governments that own MP&M facilities.

7.1.2 Government Administrative Costs

State and local governments may incur costs to implement the proposed rule for indirect dischargers. This section describes the administrative activities involved and presents estimates of their costs.

The federal and state governments will implement the requirements for direct dischargers by incorporating the new standards in existing NPDES permits. EPA does not expect governments to incur incremental administrative costs as a result of this rule for direct dischargers, since all direct dischargers must already have NPDES permits.

Publicly owned treatment works (POTWs) will incur costs to implement the proposed rule for indirect dischargers, however. Permitting authorities will have to issue permits for the first time to some indirect discharging facilities and will have to accelerate repermitting for some indirect dischargers that currently hold permits. Communities that own POTWs that must issue permits will therefore incur additional costs as a result of the proposed rule.

EPA is able to estimate total costs to POTWs, but is not able to estimate the costs to any one POTW, since it is not possible to determine what POTWs receive discharges from the regulated MP&M facilities. EPA is also not able to assess budgetary impacts on community-owned POTWs, since available data do not provide estimates of financial characteristics for the specific POTWs receiving effluent affected by this rule. The relatively low POTW permitting costs per facility estimated in this section for the proposed rule suggest, however, that impacts on individual POTWs will be minor.

a. Permitting activities

The General Pretreatment Regulations (40 CFR Part 403) establish procedures, responsibilities, and requirements for EPA, States, local governments, and industry to control pollutant discharges to POTWs. Under the Pretreatment Regulations, POTWs or approved States implement categorical pretreatment standards (i.e., PSES and PSNS).

Discharges from an MP&M facility to a POTW may be permitted in the baseline.[1] For example, industrial users subject to another Categorical Pretreatment Standard would have a discharge permit. Other significant industrial users (SIU) that are typically permitted by POTWs include industrial users that:

discharge an average of 25,000 gallons per day or more of process wastewater to a POTW;

contribute a process waste stream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or

have a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard.

EPA does not expect the costs of administering the pretreatment program to increase due to the MP&M regulation for facilities that already hold a permit specifying the allowable mass of pollutant discharge to water. Governments will incur additional permitting costs, however, for unpermitted facilities and for any facilities currently with a concentration-based permit that will be issued a mass-based permit under the proposed rule instead.

b. Data sources

EPA collected information from POTWs to support development of the MP&M effluent guideline. Of 150 surveys mailed, EPA received responses to 147, for a 98 percent response rate. The POTW survey asked respondents to provide information on administrative permitting costs, sewage sludge use and disposal costs and practices, and general information (including number of permitted users and number of known MP&M dischargers). The administrative cost information included the number of hours required to complete specific permitting and repermitting, inspection, monitoring, and enforcement activities. Respondents were also asked to provide an average labor cost for all staff involved in permitting activities. EPA used the survey responses on administrative costs to estimate a range of costs incurred by POTWs to permit a single MP&M facility.

c. Methodology

EPA performed the following steps to estimate total POTW administrative costs for the proposed rule and other regulatory alternatives:

❖ ***Determine the number and characteristics of indirect dischargers that will be permitted under the proposed rule.*** The cost of permitting a given MP&M facility varies depending on whether the facility is already permitted. EPA has information from the MP&M facility surveys on baseline permit status. Because costs differ by type of permit (mass-based versus concentration-based), EPA determined how many permits of each type would be issued. All Steel Forming & Finishing facilities will require mass-based permits under the proposed rule. Mass-based permits are not required for the other subcategories. Permit writers can determine what type of permit is appropriate for facilities in subcategories other than Steel Forming & Finishing. EPA is encouraging permit writers and control authorities to issue mass-based permits and control mechanisms, however, where appropriate and feasible. For costing purposes, the analysis of permitting costs assumes that one-third of the new or reissued permits in subcategories other than Steel Forming & Finishing will be mass-based. To the degree that POTWs do not require mass-based permits in subcategories other than Steel

[1] Under the General Pretreatment Program, a facility's discharges may be controlled through a "permit, order or similar means". For simplicity, this report refers to the control mechanism as a permit.

Forming & Finishing, this analysis will overestimate administrative costs.

❖ ***Use the data from the POTW survey to determine a high, middle, and low hourly burden for permitting a single facility.***

EPA defined the low and high estimates of hours such that 90% of the POTW responses fell above the low value and 90% of responses fell below the high value. The median value is used to define the middle hourly burden.

❖ ***Use the data from the POTW survey to determine the average frequency of performing certain administrative functions.***

For administrative functions that are not performed at all facilities, survey data were used to calculate the portion of facilities requiring these functions. For example, the survey data show that on average 38.5% of facilities submit a non-compliance report.

❖ ***Multiply the per-facility burden estimate by the average hourly wage.***

EPA determined a high, middle and low dollar cost of administering the rule for a single facility by multiplying the per-facility hour burden by the average hourly wage. The POTW survey reported an average hourly labor rate of $36.98 (1999$) for staff involved in permitting. This is a fully-loaded cost, including salaries and fringe benefits.

❖ ***Calculate the annualized cost of administering the rule.***

The number of facilities, hourly burden estimate, frequency estimates, and hourly wage estimates are all combined to determine the total cost of administering the rule. The type of administrative activities required varies over time and the total administrative cost is calculated over a 15 year time period. EPA calculated the present value of total costs using a seven percent discount rate, and then annualized the present value using the same seven percent discount rate.

d. Unit costs of permitting activities

EPA estimated unit costs for the following permitting activities:

Permit application and issuance: developing and issuing concentration-based permits at previously unpermitted facilities; developing and issuing mass-based permits at previously unpermitted facilities; developing and issuing mass-based permits at facilities with concentration-based permits; providing technical guidance; and conducting public and evidentiary hearings;

Inspection: inspecting facilities both for the initial permit development and to assess subsequent compliance;

Monitoring: sampling and analyzing permittee's effluent; reviewing and recording permittee's compliance self-monitoring reports; receiving, processing, and acting on a permittee's non-compliance reports; and reviewing a permittee's compliance schedule report for permittees in compliance and permittees not in compliance;

Enforcement: issuing administrative orders and administrative fines; and

Repermitting.

EPA believes that theses functions constitute the bulk of the required administrative activities. There are other relatively minor or infrequent administrative functions (e.g., identifying facilities to be permitted, providing technical guidance to permittees in years other than the first year of the permit, or repermitting a facility in significant non-compliance), but the associated costs are likely to be insignificant compared to the estimated costs for the five major categories outlined above.

Table 7.1 provides a summary of the estimated unit costs for each permitting activity. Appendix C provides a detailed discussion of these unit costs.

Table 7.1: Government Administrative Activities for Indirect Dischargers: Per Facility Hours and Costs

Administrative Activity	Percent of facilities for which activity is required	Frequency of activity	Typical hours and costs		
			Low	Median	High
Develop and issue a concentration-based permit at a previously unpermitted facility	100% of unpermitted facilities being issued a new concentration-based permit (2/3 of new permits)	One time	3.7 hours; $137	9.7 hours; $359	30.7 hours; $1,135
Develop and issue a mass-based permit at a previously unpermitted facility	100% of unpermitted MP&M facilities being issued a new mass-based permit (1/3 of new permits)	One time	4.0 hours; $148	12.0 hours; $444	40.0 hours; $1,479
Develop and issue a mass-based permit at a facility holding a concentration-based permit	All Steel Forming & Finishing facilities with a concentration-based permits and 1/3 of other facilities with a concentration-based permit	One time	2.0 hours; $74	8.0 hours; $296	21.0 hours; $777 year
Provide technical guidance to a permittee on permit compliance	100% of MP&M facilities being issued a new concentration-based permit	One time	1.0 hour; $37	3.3 hours; $122	10.7 hours; $396
	100% of MP&M facilities being issued a new mass-based permit	One time	2.0 hours; $74	3.7 hours; $137	13.0 hours; $481
Conduct a public or evidentiary hearing	3.2% of MP&M facilities being issued a new mass-based or concentration-based permit	One time	2.3 hours; $85	8.0 hours; $296	33.3 hours; $1,231
Permittee inspection for permit development	100% of MP&M facilities being issued a new permit	One Time	2.3 hours; $85	4.7 hours; $174	12.0 hours; $444
Permittee inspection for compliance assessment	100% of MP&M facilities being issued a new permit	Annual	1.8 hours; $67	3.7 hours; $137	10.0 hours; $370
Sample and analyze permittee's effluent	100% of MP&M facilities being issued a new permit	Annual	1.0 hour; $37	3.0 hours; $111	14.0 hours; $518
Review and data entry of permittee's compliance self-monitoring reports	100% of MP&M facilities being issued a new permit	Annual	0.5 hours; $18	1.0 hour; $37	3.5 hours; $129
Receive, process and act on a permittee's non-compliance reports	38.5% of all indirect dischargers receiving a new permit.	5 times per year	1.0 hour; $37	2.0 hours; $74	5.7 hours; $211
Review a compliance schedule report	Meeting milestones: 16.0% of all facilities issued a new permit (94% of the 17% who have compliance milestones).	2 reports per year	0.5 hours; $18	1.0 hour; $37	3.0 hours; $111
	Not meeting milestones: 1% of all facilities issued a new permit (6% of the 17% who have compliance milestones).	2 reports per year	0.8 hours; $30	1.8 hours; $67	6.0 hours; $222
Minor enforcement action e.g., issue an administrative order	7% of MP&M facilities being issued a new permit	Annual	1.0 hour; $37	3.7 hours; $137	13.3 hours; $492
Minor enforcement action, e.g., impose an administrative fine	7% of MP&M facilities being issued a new permit	Annual	1.0 hour; $37	5.3 hours; $196	24.7 hours; $913
Repermit	100% of MP&M facilities being issued a new permit	Every 5 years	1.0 hour; $37	4.0 hours; $148	17.0 hours; $629

Source: U.S. EPA analysis of POTW survey responses.

e. Results

Table 7.2 summarizes the estimated POTW permitting costs for the proposed rule, Option 2/6/10, and Option 4/8. Appendix C presents detailed calculations of permitting costs for these regulatory options. These calculations reflect the incremental number of facilities requiring different types of permitting, inspection, monitoring, enforcement and repermitting in each year multiplied by the unit hours and cost per facility for those activities.

All facilities are assumed to receive a permit within a three-year compliance period. Some facilities with existing permits are repermitted sooner than they otherwise would be on the normal five-year permitting cycle. The cost analysis

calculates incremental costs by subtracting the costs of repermitting these facilities on a five-year schedule from the costs of repermitting all such facilities within three years. EPA assumes that the required initial permitting activities will be equally divided over the three-year period. The analysis also calculates the net increase in the number of facilities requiring permitting by subtracting the number of facilities that close due to the rule from the number of facilities that will require new permits under the proposed rule.

Table 7.2: POTW Permitting Costs by Regulatory Option

	Proposed Rule			Option 2/6/10			Option 4/8		
Number of facilities permitted:									
new concentration-based permit	432			16,009			15,119		
new mass-based permit	216			8,004			7,559		
conversion of existing concentration-based to a mass-based permit	223			8,424			8,422		
POTW permitting costs over 15 years (million 1999$):	high	med.	low	high	med.	low	high	med.	low
net present value	$8.3	$2.5	$1.0	$357.7	$107.1	$45.7	$332.6	$99.7	$42.5
annualized (@ 7%)	$0.9	$0.3	$0.1	$39.3	$11.8	$5.0	$36.5	$10.9	$4.7
maximum costs in any one year	$1.6	$0.5	$0.2	$55.9	$17.2	$7.2	$52.3	$16.1	$6.7

Source: U.S. EPA analysis.

EPA estimates that POTWs as a whole will incur incremental average annualized costs over 15 years of between $115,000 and $912,000 under the proposed rule. These costs include issuing new permits to facilities that do not currently have permits, issuing mass-based permits to some facilities that currently have concentration-based permits, and repermitting some facilities sooner than would otherwise be required to meet the three-year compliance schedule. On average, a POTW's costs for the incremental permitting are only $23 to $184 per permitted MP&M indirect discharger under the proposed rule.

EPA expects that these increases in costs will be partially offset by reductions in government administrative costs for facilities that are already permitted under local limits and that will be repermitted under this rule. The technical guidance provided by EPA as a part of this rulemaking may reduce the research required by permit writers in developing Best Professional Judgement (BPJ) permits for industrial dischargers not previously covered by a categorical standard or a water quality standard. Further, the establishment of discharge standards may reduce the frequency of evidentiary hearings. The promulgation of limitations may also enable EPA and the authorized States to cover more facilities under general permits. EPA did not estimate these cost savings to permitting authorities that may result from the rule.

The proposed option requires substantially less permitting by POTWs than the other two options, because a large percentage of facilities that would otherwise have to be permitted are excluded by low-flow cutoffs or subcategory exclusions. Option 2/6/10 results in slightly higher permitting costs than Option 4/8, because more facilities would close under Option 4/8 and therefore not have to be permitted.

7.2 COMMUNITY IMPACTS OF FACILITY CLOSURES

EPA considered the potential impacts of changes in employment due to the proposed rule on the communities where MP&M facilities are located. Changes in employment due to the rule include both job losses that occur when facilities close and job gains associated with facilities' compliance activities. EPA estimated that a total of 5,916 jobs would be lost at the 199 facilities projected to close under the proposed rule. (See Chapter 6.) At the same time, EPA estimated that manufacturing and installing compliance equipment would lead to 4,488 full-time equivalent (FTE) positions, and that operating and maintaining compliance systems would result in another 286 FTEs per year. Over a 15 year analysis period, the net effect of job gains and losses caused by the rule is an increase of 2,575 FTE-years or an average of 172 FTEs per year. This estimate assumes that workers that lose their job are unemployed for an average of one year, and that compliance investments and closures occur evenly over the first three years after promulgation. This estimate of employment impacts is likely to understate the net increase, because it ignores the fact that some production and employment lost at

closing plants is likely to result in increased production and employment at other MP&M facilities.

Given the projected overall increase in employment due to the proposed rule, EPA does not expect the rule to have significant impacts at the community level. It is not possible to predict precisely where the job gains and losses will occur. However, facilities that are projected to close due to the rule have employment ranging from 2 to 205 FTEs. MP&M facilities tend to be located in industrialized urban areas, and closures of this size are not likely to have a major impact on a local economy.

GLOSSARY

publicly owned treatment works: a treatment works as defined by section 212 of the Clean Water Act, which is owned by a State or municipality. This definition includes any devices or systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. (http://www.epa.gov/owm/permits/pretreat/final99.pdf)

Unfunded Mandates Reform Act: Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under §202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and Tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, §205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule.

ACRONYMS

POTW: publicly owned treatment works

UMRA: Unfunded Mandates Reform Act